DEC STD 115-0 Manufacturing Plant Documentation (MPD) Identification and Control

DOCUMENT IDENTIFIER: A-DS-EL00115-00-0000 Rev E, 06-Jan-1992

ABSTRACT: This standard describes the document identification and control requirements necessary to index and retrieve manufacturing plant documentation. It also provides guidelines and recommended practices for generating manufacturing plant-specific documentation.

APPLICABILITY: This standard applies to all plant-specific documentation. Manufacturing plant documentation shall be limited to information that is unique to a manufacturing plant due to its size, organization, geographic location, population, product volume, or product complexity.

STATUS: Approved 06-Jan-1992; use VTX SMC for current status.

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CONTENTS

1 INTRODUCTION 1

2 RESPONSIBILITIES 1
2.1 MANUFACTURING PLANTS 1

3 MPD RECORD RETENTION 1
3.1 DIGITAL RECORDS AND INFORMATION MANAGEMENT 1
3.2 ENGINEERING SUPPORT OPERATIONS AND IMAGE INFORMATION SYSTEMS 2

4 MANUFACTURING PLANT DOCUMENTATION CONTROL TOOLS 2
4.1 VAX COMPUTER AIDED MANUFACTURING PROCESS SYSTEM (VAXcamps) . . 2

5 MANUFACTURING PLANT DOCUMENTATION ACQUISITION 2

6 DOCUMENT IDENTIFIER 2
6.1 MEDIA AND SIZE CODE 3
6.1.1 MPD Mnemonic Codes 3
6.1.2 Base Number and Variable Identifier 5
6.1.3 Reference Identifier 6
6.2 DOCUMENT INFORMATION 6
6.2.1 Title 6
6.2.2 Responsible Person 7
6.2.3 Release Date 7
6.2.4 Revision Indicator 7
6.2.5 Proprietary Information 7
6.2.6 Document Quality Requirements 7

7 DOCUMENTATION GUIDELINES AND RECOMMENDED PRACTICES 7
7.1 MPD REVIEW AND APPROVAL 8
7.2 LOCAL PLANT DOCUMENT CONTROL 8

Appendix A REFERENCED DOCUMENTS 9

A.1 EL-Class Digital Documents 9

A.2 Ordering Information 9

TABLES

1 MNEMONIC CODES 3
2 AREA OF APPLICATION 6

1 INTRODUCTION

Manufacturing plant documentation (MPD) describes various operations unique to the plant that generated the documentation. As a rule, product-specific documentation that is not necessarily plant-specific is generated as a product engineering specification, or as a manufacturing specification. Process-specific documentation is provided in "EL" class documents. Refer to *DEC STD 001-0 Management of Technical Standards and Related Documentation* for information on this type of documentation.

2 RESPONSIBILITIES

It is the responsibility of the document control group to generate and control plant-specific documentation in accordance with the identification and indexing requirements of this standard.

2.1 MANUFACTURING PLANTS

Plant-specific documentation shall be generated as specified by *DEC STD 101-0 Manufacturing Operations Plan for Assembly, Inspection, and Test: Policy and Requirements* and shall be controlled according to the guidelines and recommended practices described in this standard.

Document information for creating MPD data bases and updates shall be submitted to the local plant MPD coordinator. A plant index shall be maintained, and the accuracy of the information on file verified periodically.

Each manufacturing plant shall ensure that MPD is retrievable from a backup file, in case of a local plant loss. Refer to subhead 3, MPD Record Retention, for additional information.

3 MPD RECORD RETENTION

When filming is selected for meeting record retention requirements of DEC STD 101-0, each MPD master copy must be filmed. The film masters are then filed by document identifier and retained in an offsite location as a safeguard against local loss, fire, or disaster. Filming must be done within the requirements of *DEC STD 162-0 Micrographics: Format and Quality Requirements for Microfilm.* Plants may perform this function themselves, or use the services of Engineering Support Operations and Image Information Systems (subhead 3.2).

3.1 DIGITAL RECORDS AND INFORMATION MANAGEMENT

Digital Records and Information Management (DRIM) provides corporate record retention guidelines and information concerning the operation and administration of manufacturing businesses. Areas include:

- Existing retention schedules within Digital - ($VTX DRIM)
- Code of federal regulations
- State regulations

Contact DRIM, NRO2-2/J8, DTN: 234-5259 for additional information.

3.2 ENGINEERING SUPPORT OPERATIONS AND IMAGE INFORMATION SYSTEMS

This organization provides archiving techniques for manufacturing plant documentation. Filming and filing information and services are available for manufacturing plants requesting such services. Conversion and consulting services are also available. For additional information, contact Engineering Support Operations and Image Information System, NR05-1/P2, DTN: 234-4088.

4 MANUFACTURING PLANT DOCUMENTATION CONTROL TOOLS

4.1 VAX COMPUTER AIDED MANUFACTURING PROCESS SYSTEM (VAXcamps)

Manufacturing Plant Documentation (MPD), can be generated using tools such as VAX Computer Aided Manufacturing Process System (VAXcamps), or other compatible tools used to create, modify, control, disseminate, and view manufacturing process information. For additional information, contact Computer-Aided Logistics Support Enterprise Integration Center (CEIC), CTC2-1/H12, DTN: 287-3084.

5 MANUFACTURING PLANT DOCUMENTATION ACQUISITION

A list of manufacturing plant documentation control groups are maintained by MPD Coordination, located in NR04/D4, DTN: 234-4559. Copies of documents that are maintained at local plants may be obtained directly from the originating plant.

6 DOCUMENT IDENTIFIER

The requirements for document identifiers can be summarized as follows.

a. Plants are responsible for assigning and maintaining a unique document identifier for each of their documents.

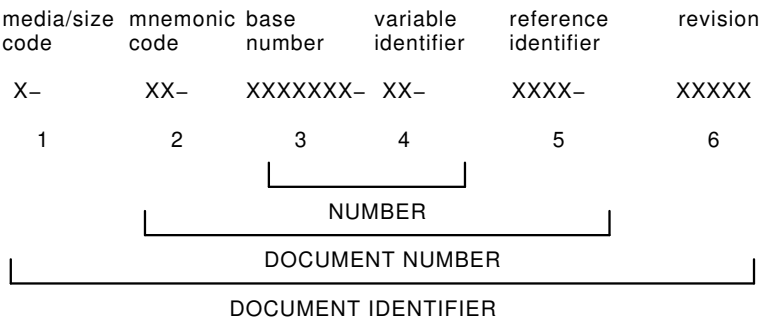
b. The document identifier must be assigned according to the format described in this standard.

c. The assigned document identifier and revision must appear on every page of the document.

d. Each document must be uniquely identified using the five fields of the document identifier.

The document identifier is assigned by the originating plant.

Each document must have an MPD document identifier that is compatible with the following document identifier format as specified in *DEC STD 012-0 Part Identification Standard*.



6.1 MEDIA AND SIZE CODE

The media and size code indicates the medium on which the information is documented. This code is to be one of the valid document media codes specified in *DEC STD 012-1 Document Identification Conventions Including Mnemonic Codes*. It will usually be A, indicating the document is on 8-1/2 × 11 inch paper, or K, indicating the master document is on computer media.

6.1.1 MPD Mnemonic Codes

The standard mnemonic codes that are designated *plant-specific* in DEC STD 012-1 shall be used to identify the function that a manufacturing plant document serves, specifies, or supports. Table 1 lists the DEC STD 012-1 codes that are reserved for MPD use.

Table 1: MNEMONIC CODES

Mnemonic	Type of Document
AC	Acceptance procedures for hardware and software products.
AM	Administration documents regarding operational plans, policies, personnel, finance, purchasing, insurance, information control, and data processing.
AS	Assembly instructions, procedures, sequence, or checklist.
AU	Audit policies, plans, and procedures used to assess product quality. This applies to *In Process*, *End of Line*, and *Field Audits*.
CB	Calibration and control of test and measurement equipment, tools, production fixtures, and so forth.

Table 1 (Cont.): MNEMONIC CODES

Mnemonic	Type of Document
CF	Hardware configuration and tech edit rules and guidelines to be used only when not provided in engineering documentation.
CN	Conversion procedure for products being changed to a different model designation, or used products being refurbished.
DM	Dock merge policies, procedures, flowcharts, checklists, and so forth.
DO	Documentation control used for distribution, maintenance, and retention of documentation within a facility. *Documentation* includes corporate and local specifications and standards. It also includes records that apply to any product shipped to or services rendered a customer.
FM	Facilities management, policies and procedures regarding maintenance, security, plant engineering, and so forth.
IP	Inspection procedures, checklists, and so on that apply to all stages of inspection (for example, incoming, preliminary, intermediate, final).
IQ	Installation quality, relating to the interface with Digital Service regarding products shipped to customers.
ME	Manufacturing engineering, including manufacturing hardware or software support, and ECO control. Also includes applicable industrial engineering standards used by Digital.
MT	Material control procedures for the forecasting, storage, allocation, handling, and distribution of materials.
NP	New products development, introduction, monitoring.
PD	Production control documents that include production planning, order administration, scheduling, and inventory control.
PG	Packaging instruction, including general packaging procedures, and product-specific packaging requirements.
PP	Preship procedures are used to define the process of preparing a finished product for customer shipment. This process includes consolidation of all parts of the customer order, packaging, paperwork preparation, and final inspection.
PR	Process documentation defining process control summaries, flowcharts, checklists, procedures, and manufacturing specifications. This process includes integration procedures and operating instructions.

Table 1 (Cont.): MNEMONIC CODES

Mnemonic	Type of Document
QU	Quality related documentation, including quality control checklists and procedures used to ensure and/or measure product and process quality. Quality assurance and quality engineering documentation that applies to internal or vendor quality and failure analysis and corrective action documentation are also covered in this category.
RE	Rework or repair procedures used to make an item meet specification requirements and/or make the item functional.
SF	Safety related documentation that is used to prevent hazardous conditions on a product or in a working environment. This documentaion includes safety test procedures (for example, HIPOT), and procedures used to identify and correct product safety problems prior to customer shipment.
TG	Training documentation that covers theory and manual skills necessary to meet job qualification criteria.
TL	Tools or fixtures used for supporting work during manufacturing or for installation purposes. Can also apply to tooling defined by *DEC STD 012-9 Unified Numbering Code- 94-Class Tool Numbering Conventions and Assignment Procedures.*
TP	Test procedure or test flowcharts include all types and levels of testing, such as checkout test, reliability test, vibration test, thermocycle test, burn-in test, final test, system level test, and so on.
TU	Touch-up procedures define the final cosmetic preparation process that occurs after manufacture and before shipping.

6.1.2 Base Number and Variable Identifier

The base number and variable identifier fields are used to state the application of the document.

If it applies to a product, subassembly, or part, the standard base number defined in DEC STD 012-0 shall be used. The *Option and Module List* gives the standard model designations.

When a plant document is written to implement a standard or specification, the standard or specification number will be used as the MPD base number. Refer to the VTX SMC for a list of standards and specifications.

When the document applies to a general product application area, or specialized manufacturing operation, then a term that is representative of that application is used for the content of the base number field. See Table 2 for these terms. Before using a base number in Table 2, plants must ensure that the document is definitely not related to an existing standard or specification. Trailing spaces will be used to complete the base field as required: leading spaces will be used for the variable identifier.

Table 2: AREA OF APPLICATION

CPU	Central Processing Unit Manufacturing Group
DISK	Disk Manufacturing
FLDRET	Customer Returns
GENMFG	General Manufacturing
LSI	Large Scale Integration Manufacturing Group
MEMORY	Memory Manufacturing Group
METALS	Metal Fabrication
MODULES	Module Manufacturing
PWB	Printed Wiring Board Manufacturing
SSB	Software Supply Business
SYS MFG*	System Manufacturing
TAPE	Tape Manufacturing
PRINTER	Hard Copy Terminal Manufacturing
VIDEO	Video Terminal Manufacturing
FAR EAST	Far East Support Group
STOCKRM	Stockroom/Warehouse
BKPLANE	Backplane Manufacturing

* Eliminated due to FA&T operation phase-out. Documents currently identified with "SYSMFG" base numbers should eventually be revised according to guidelines described in subhead 6.1.2, Base Number and Variable Identifier.

6.1.3 Reference Identifier

The first 2 characters of the reference identifier field will contain the plant code of the responsible plant, as listed in the *Digital Facility Communication Directory. DEC STD 031-2 Product Serialization - Site Codes* explains how to derive 2-character site codes from 3-character codes defined in the *Address Directory*. This code assures that the MPD identifiers are unique to that plant and will not be duplicated. The remaining 2 characters may be used for a sequential number to differentiate between documents if the first 4 fields of the document identifier are the same. If only the plant code is used, it will be followed by 2 spaces, to complete the 4-character reference identifier field.

6.2 DOCUMENT INFORMATION

In addition to the document identifier requirements specified in the proceeding pages, each document shall provide the following information, as a minimum, as well as information preprinted on forms described in *DEC STD 013-0 Standard Engineering Drawing Formats and Forms*.

6.2.1 Title

The title should include key words that relate to the contents of the document. Searching for particular subjects in an automated data base is easier if this practice is used.

6.2.2 Responsible Person

Each document shall indicate the one person who is to be the focal point for that document. He or she shall be responsible for the technical content, accuracy, and revision control of that document. Committees, or functional organizations, shall not be stated as the responsible persons.

6.2.3 Release Date

The release date of the current revision of the document shall appear on the title page. The date must be provided in the standard date code format per *DEC STD 112-0 Standard Date Format for Output* (for example, 06-Jan-1992).

6.2.4 Revision Indicator

The document revision shall be as specified in DEC STD 012-1.

6.2.5 Proprietary Information

Proprietary information classification markings shall appear on manufacturing plant-specific documentation. It is the responsibility of the document originator to determine which proprietary classification should be used. For additional information refer to *DEC STD 128-0 Security Classification for Engineering Intellectual Property — Policy and Regulations* or contact your local Digital security organization.

6.2.6 Document Quality Requirements

MPD must meet all of the appropriate quality requirements specified by *DEC STD 182-0 Engineering Documentation Acceptance Criteria.*

7 DOCUMENTATION GUIDELINES AND RECOMMENDED PRACTICES

All variations of manufacturing processes that apply to more than one plant, such as soldering, crimping, and standard manufacturing controls, are to be documented according to the "EL" documentation system under Standards and Methods Control.

NOTE

76-65XXX series, previously reserved for manufacturing-related documentation, is replaced by and integrated into the "EL-MFXXX" series.

Manufacturing information that applies to a specific product or process shall be documented by means of MPD, as described in this standard. This process prevents complications in transferring a product between manufacturing facilities, or in using processes in more than one plant.

Manufacturing plants are encouraged to develop, implement, and document requirements and procedures that meet their unique business needs. These needs should also be documented.

Manufacturing documentation that contains sensitive information must be classified and labeled to ensure proper protection. Refer to DEC STD 128-0.

A document might require a legal notice, especially if it is intended for distribution outside Digital. Refer to *DEC STD 197-0 Legal Requirements and Guidelines for Digital Publications and Software.*

7.1 MPD REVIEW AND APPROVAL

Each manufacturing plant or manufacturing business within a facility should document how MPD is to be reviewed and approved. This review includes the assigned responsibilities for sign-off. The formal review and approval cycle will serve to certify the documents that are to be in effect.

7.2 LOCAL PLANT DOCUMENT CONTROL

Each manufacturing plant, or if necessary, each manufacturing business within the plant, shall provide document control for the following functions.

a. Review of documentation generated by the plant, to verify that the documents meet the requirements described in this standard.

b. Provide document identifier assignments.

c. Maintain an index consisting of manufacturing plant documentation.

d. Serve as the focal point for MPD transactions between the plant and the rest of the corporation.

e. Assure that backup copies exist, as stated under subhead 3, MPD Record Retention.

f. Maintain a document storage and retrieval system.

APPENDIX A REFERENCED DOCUMENTS

A.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00001-00	*DEC STD 001-0 Management of Technical Standards and Related Documentation*
EL-00012-00	*DEC STD 012-0 Part Identification Standard*
EL-00012-01	*DEC STD 012-1 Documentation Identification Conventions Including Mnemonic Codes*
EL-00012-09	*DEC STD 012-9 Unified Numbering Code - 94-Class Tool Numbering Conventions and Assignment Procedures*
EL-00013-00	*DEC STD 013-0 Standard Engineering Drawing Formats and Forms*
EL-00031-02	*DEC STD 031-2 Product Serialization - Site Codes*
EL-00101-00	*DEC STD 101-0 Manufacturing Operations Plan for Assembly, Inspection, and Test: Policy and Requirements*
EL-00112-00	*DEC STD 112-0 Standard Date Format for Output*
EL-00128-00	*DEC STD 128-0 Security Classifications for Engineering Intellectual Property — Policy and Regulations*
EL-00162-00	*DEC STD 162-0 Micrographics: Format and Quality Requirements for Microfilm*
EL-00182-00	*DEC STD 182-0 Engineering Documentation Acceptance Criteria*
EL-00197-00	*DEC STD 197-0 Legal Requirements and Guidelines for Digital Publications and Software*

Use VTX SMC to order copies of EL-class documents from Standards and Methods Control. Send distribution questions to JOKUR::SMC or call DTN: 234-4423.

A.2 Ordering Information

Following are the sources for documents not available from Standards and Methods Control.

- Use VTX CEO to obtain the *Option and Module List*,on-line, hard copy, CDROM, or microfiche. Send distribution questions to the Chief Engineer's Office, MLO3-2/H14, DTN: 223-2886, IPOVAX::MAGAZU.
- The *Corporate Mail Systems Site Distribution List* can be obtained by contacting Corporate Mail Systems, NR02-1/00, DTN: 234-4392.

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